Questions: Readying Michigan to Make Good Energy Decisions

Overall Questions

1. What information do energy policy makers need to consider in order to make good energy decisions?

2. What existing data or studies are available for Michigan policymakers to consider when evaluating Michigan's energy policy after 2015? (Data or studies that address specific questions can be posted in response to specific questions).

Renewables

3. How much renewable energy will be operational in Michigan by the end of 2015? What is the total dollar amount of Michigan renewables investment to date and expected when the 10% goal is reached in 2015?

4. To date, what has been Michigan's cost of renewables, and how has that impacted rates paid by residential, commercial, and industrial customers?

5. How do Michigan's costs for renewable energy compare to the cost of existing generation and to the cost of new non-renewables generation today?

6. What are the predicted costs of new energy generation by type in the future? How would a carbon tax, increased carbon regulation, and the elimination of specialized tax treatment impact those cost estimates?

7. What transmission upgrade costs and back-up capacity / integration costs have Michiganders absorbed as part of the current renewables standard? Are any of those offset by other benefits of those investments?

8. How can reliability costs and benefits be assessed and incorporated into an analysis of renewables costs? Has any jurisdiction tried to do so, and if so, how?

9. How does Michigan's renewables requirement compare to other states / provinces / countries? How are other jurisdictions similar / dissimilar? What has been the experience in other jurisdictions in terms of compliance, costs, reliability, and environmental impact?

10. What is Michigan's long-term potential for more wind, solar, hydro, biomass, landfill gas, and other renewables sources?

11. What is the long-term potential for more wind, solar, hydro, biomass, landfill gas, and other renewables sources in other locations to which Michigan is tied electrically?

12. What are the current and projected relative costs of existing and new builds for wind, solar, hydro, biomass, landfill gas, coal, natural gas, nuclear, and other sources? How would those differ if placed in another jurisdiction electrically tied to Michigan?

13. What are the current and projected relative costs per kilowatt hour for existing and new builds for wind, solar, hydro, biomass, landfill gas, coal, natural gas, nuclear, and other sources? How would those differ if the generation source was placed in another jurisdiction electrically tied to Michigan?

14. What methods have been used by other states or countries to set renewable targets?

15. What affect did Michigan's requirement that renewable energy be built in a defined geographic area have? What job growth is attributable to that requirement? What cost, reliability, and environmental impacts are attributable?

16. What legal arguments have been posited regarding the legality of requirements/benefits to place renewable energy generation in specific geographic areas, or requirements/benefits related to locally manufactured products? Have any official opinions from courts, attorneys general, etc. made decisions regarding those arguments?

17. What has Michigan's experience been with siting renewable and non-renewable energy generation to date? If siting becomes easier or more difficult, how will that impact both cost and the overall renewable capacity of Michigan?

18. How has Michigan, and how have other jurisdictions limited the rate impact of renewable energy mandates on the residential, commercial, and industrial sector, if at all? What effect have such rate limitations had on other areas?

19. How has Michigan chosen to reflect the costs of renewables on customer bills, and how have other jurisdictions treated the billing of renewable energy?

20. How has Michigan handled the decision regarding what entities should construct and own renewable energy (e.g. an incumbent utility, an independent developer, feed-in tariffs)? What has been the practice in other jurisdictions? Has the type of project, cost of project, etc. varied depending on the entity constructing or owning the project?

21. How has Michigan, and how have other jurisdictions, applied energy mandates in situations where an existing provider has excess capacity prior to the mandate?

22. How has Michigan, and how have other jurisdictions, treated energy efficiency or optimization and renewables as related or separate? For instance, have credits generated from one or the other been interchangeable or separate? What have been the cost, reliability, and environmental impacts of different regimes?

23. How has Michigan, and how have other jurisdictions, chosen to incentivize or penalize exceeding renewable targets?

24. Michigan law currently contains provisions for incentive renewable energy credits, and advanced cleaner energy credits. What impact has the provisions for incentive renewable energy credits and advanced cleaner energy credits had on renewable energy in Michigan? What has been the impact of similar provisions in other jurisdictions?

25. How have eligible "renewable"/ "clean"/ "sustainable" energy resources been defined in other jurisdictions? How has the possibility of new forms of energy been accommodated, if at all?

26. What has Michigan done in the past regarding carve-outs for certain renewable sources? What have other jurisdictions done? What are the impacts of such carve outs on adaptability, affordability, reliability, and environmental protection?

27. Has Michigan, or have other jurisdictions, incentivized dispatchable renewable sources such as biomass compared to intermittent renewables generation? Why or why not?

28. Has Michigan, or have other jurisdictions, incentivized energy storage technologies or included energy storage in a renewable or clean energy standard? Why or why not?

29. Has Michigan, or have other jurisdictions, incentivized flexible, fast-ramping non-renewable generation as a part of or a complement to the renewable standard? Why or why not?

30. Has Michigan, or have other jurisdictions, used a statewide net metering program? How have such systems handled small-scale and larger projects? What policies have

been proposed or tried regarding community renewables[1], meter aggregation[2] and neighborhood net metering[3]?

31. How has Michigan or other jurisdictions proposed addressing possible impacts from the adoption of a federal RPS?

32. How has the current law regarding the electric marketplace (i.e. electric choice) dealt with renewable energy compliance? How have other states with deregulated and regulated systems addressed compliance?

33. What impact has Michigan's retail market structure had on compliance with the renewable energy standard?

34. How has Michigan or other jurisdictions designed their renewable standards to adapt to unforeseen circumstances, or proposed to do so? What methods beyond legislative changes have been considered or implemented?

Energy Efficiency

1. What are Michigan's current Energy Optimization standards, and what was the timeline for compliance? What is the compliance history?

2. What studies, data, or reports should be reviewed or prepared to appropriately measure if the current energy efficiency programs are cost effective?

3. What are the total dollar amounts of investment and savings achieved to date, and what levels are expected to be achieved when the 2015 energy savings goals are reached for natural gas and electricity?

4. What is the history of the cost of conserved energy for natural gas and electric efficiency programs in Michigan by class? How does this cost compare to the costs of new and existing generation? What is the history of the savings for participants and non-participants?

5. Can energy efficiency efforts impact reliability, and if so, how have Michigan and other jurisdictions addressed that in their efficiency standards and implementation?

6. How does Michigan compare to other states / provinces / countries with respect to energy efficiency standards? Are the standards correlated with the cost of energy or excess generating capacity in such jurisdictions? How does Michigan's efficiency standard compare given our cost of energy and generating capacity?

7. What are the related cost and benefits (re affordability, reliability, and the environment) of a range of possible energy efficiency standards (including maintaining our current standard, and increasing it to various levels?

8. How has Michigan, and how have other jurisdictions, treated various customer classes in energy efficiency standards?

9. What have other jurisdictions' energy efficiency programs relied on: mandates, incentives, or both? What has the experience been with the two regimes?

10. Given current technology, how much energy efficiency is technically feasible in Michigan? What is the remaining cost-effective energy efficiency potential in MI, taking into account: 1) what has been tapped to date; and 2) what will be tapped by the end of 2015 through utility energy optimization programs?

11. The current Energy Optimization standards are a type of numerical standard, i.e. one that explicitly defines the quantity of energy savings to be achieved for a given program year (Megawatt hours or Mcf), based on retail sales. Have other jurisdictions used other methods (including non-numerical standards, or Commission discretion to impose requirements), and if so, what was the result?

12. Has Michigan and have other jurisdictions evaluated energy efficiency programs based upon first year savings and/or on lifecycle savings?

13. Has Michigan, and have other jurisdictions, imposed spending caps? If so, what has the experience been?

14. What methods for measuring costs and benefits (e.g. Utility Resource Cost Test or Total Resource Cost) have been proposed or used by various jurisdictions, and what is the effect of using one method over another? Are annual savings or predicted lifecycle levelized costs used more often, and what effect does selecting one option over another have?

15. How have energy efficiency programs in Michigan or other jurisdictions addressed non-traditional proposals for energy efficiency (e.g. digital metering, grid management technologies, or improvements on the utility side of the meter)? What has been the effect of the inclusion or lack thereof?

16. Have energy efficiency programs in Michigan or other jurisdictions addressed long-lifecycle programming such as interest rate buy-downs, home performance programs, industrial whole process programs, and deep savings programs for business customers?

17. What "decoupling mechanisms" have been used by Michigan and other jurisdictions as part of an energy efficiency standard? What have been the costs and benefits associated with those mechanisms?

18. How has Michigan, and how have other jurisdictions, coordinated weatherization for low-income customers and other energy efficiency efforts?

19. Has Michigan, or have any other jurisdictions, attempted to incentivize peak shaving vs. general energy efficiency? What have been the costs and benefits associated with these policies?

20. What impact has Michigan's retail choice electricity market had upon energy optimization and compliance in Michigan? What has been the impact in other jurisdictions?

21. How does Michigan's Energy Optimization Standard and Michigan's Renewable Energy Standard interrelate in terms of planning, implementation and compliance? How does energy efficiency and renewable energy interrelate in other jurisdictions?

22. How has Michigan or other jurisdictions designed their efficiency standards to adapt to unforeseen circumstances, or proposed to do so? What methods beyond legislative changes have been considered or implemented?

Electric Choice

1. Since the passage of PA 141 of 2000 and PA 286 of 2008, what has been the experience with retail electric choice in Michigan in terms of participation (number and load of choice customers, customers in the queue, and number of competitive providers by customer class) and customer savings?

2. What approaches to the retail electric marketplace have been tried in Michigan and in other states and jurisdictions?

3. What is the experience with retail electric choice in other states / provinces / countries in terms of customer participation, rates, savings, competitive providers, and other characteristics? How was the transition to choice, to full restructuring, or to re-regulation handled from an implementation standpoint?

4. How are other retail electric choice (i.e., restructured) states similar or dissimilar to Michigan in terms of market structure (divestiture of utility business units), resource mix, generation capacity, and incumbent prices relative to competitive market prices?

5. Are electric rates lower in choice states than fully regulated states after considering historical trends as well as rate freezes, price caps, and re-regulation?

6. Would a change in the choice cap have an impact on the financial stability of utilities and investors' ability to make long-term, substantial investments in new generation? What are the potential implications (benefits, costs, risks) of a greater or lesser reliance on wholesale markets to meet long-term capacity needs?

7. What has been the experience of other states in terms of meeting capacity needs under various market regimes (i.e. fully regulated, partially restructured, and restructured)?

8. What markets forces, policy or other factors could change the current market dynamic for choice? How many of these factors affect the viability of choice in Michigan?

9. What are the historical trends vis a vis other states regarding reliability, affordability, and environmental protection under the different regulatory structures Michigan has tried?

10. What kind of future changes could have a strong effect on affordability, reliability, and environmental protection under different regimes?

11. What data and studies should be reviewed and prepared to determine how various market structures impact rate levels, rate volatility, and reliability over all stages of the commodity cycle?

12. What data and studies would help identify the relative importance of pricing stability and market-based pricing to Michigan residents and businesses?

13. How has Michigan, and how have other states, addressed the issue of stranded costs?

14. What policies have been proposed or implemented by Michigan and other jurisdictions to ensure pricing visibility?

15. What has Michigan, and what have other jurisdictions, proposed or put in place regarding alternative electric supplier (AES) licensing process or requirements?

16. How has Michigan, and how have other jurisdictions, treated the various customer classes in terms of participation in restructured retail markets or partially restructured retail markets?

17. What have been the impacts of structurally separating transmission and distribution in Michigan?

18. What data or studies exist regarding the effect of a strategy of divestiture or structural separation of generation assets when moving to a restructured retail market?

19. What data or studies exist regarding the costs or benefits of having an integrated electrical system (generation/transmission/distribution) versus a system that separates some or all of these roles among different entities?

20. What data or studies should be reviewed or prepared to determine the likely effects of possible methods to calculate and recover stranded costs?

21. How have various restructured or partially restructured retail markets handled the issues of low-income customers and uncollectibles?

22. With full retail restructuring, what data or studies are available regarding the impact of having a supplier of last resort or having no such supplier?

23. What legal arguments regarding interference with contracts have been offered in the restructuring or re-regulation contexts, and what were the results of any adjudication of those arguments by commissions or courts?

Identification of Additional Areas that Could be Part of Later Decision Making

1. What are possible definitions of "reliability" that have been used or proposed for use by policy makers? What studies exist regarding the economic and environmental benefits of baseline or "additional" reliability?

2. What is the potential in Michigan for non-renewable generation from Michigan energy sources?

3. What are the effects on Michigan of belonging to multiple regional transmission organizations? What voting structures are used in both systems, and how many votes in each system are allocated to Michigan entities? What percentage of each system do Michigan customers represent?

4. What time period is allowed for rate case decisions in Michigan and other jurisdictions?

5. What has been Michigan's experience with the self-implementation of rates?

6. Do other jurisdictions have (or have had) a policy of self-implementation to reduce "regulatory lag"? How are they similar or different from Michigan's, in design and effect?

7. What policies does Michigan have regarding siting of transmission, and how does that compare to and/or coordinate with policies regarding siting of generation?